against the spread of the disease by culturing all suspicious cases. As this is the only means so far as known of its spread, it assumes a place of first importance.[11]

Fortunately the meningococcus is short-lived outside of its natural habitat, the nasopharynx.

Peters [12] classifies cerebrospinal fever into two types: First, those in whom the sphenoid sinuses are patent; Second, those in whom one or both sphenoid sinuses are closed. Those with patent sinuses appear to run a milder course, though in a series of cases in which all had pus in the sphenoid, opening of this sinus did not result in much improvement. According to Thomas, Fleming and Lundi,[13] there is always a primary invasion of streptococcus and these are always obtained from first cultures. It is also worth noting that while the disease may have three distinct stages—catarrhal, septicaemic and meningeal—it may stop at either of the first two, and the case may only present symptoms of pharyngitis and laryngitis, or it may go on to rather severe influenza symptoms. The pharynx and pillars in these cases are deep red, the veins prominent, and the uvula generally edematous.

In regard to the treatment of meningitis of nasal origin shall we operate in the presence of symptoms which lead us to believe the meninges are threatened (meningismus) or involved? There is some difference of opinion as to this. We know that recoveries have followed proper surgical drainage in meningitis of aural origin. It seems logical then to believe that, provided we operate fully and completely in such cases, we should look for some cures, as the conditions are analogous. I believe with Luc [14] that half interference is worse than none in such cases. He quotes, in his long monograph on the subject, several cases in which all the sinuses involved were operated, except the antrum, and blames the fatal results on failure to do this at the same time. Given a case of meningitis, not epidemic, due to infection within the nose, I would advocate a thorough removal of all diseased structures. Where the path of infection to the dura is to be seen, the bone should be removed in all directions until healthy dura is reached.

Spinal punctures give relief of headache in all forms of meningitis, and greatly hasten the disappearance of the serous form, which, however, always recovers whatever treatment or lack of treatment is used.

Antimeningococcic serums have been disappointing, but vaccines seem to have been distinctly an aid where used.[15] Soamin intravenously [16] and collargol [14] have been successful in some cases, apparently.

As the case stands at present, we can do more to prevent than to cure the disease. When operation for infection is indicated, let it be thorough. Avoid procedures which have been known to cause involvement of the meninges, such as electro-cauterization of the middle turbinates, opening up the channels of the diploë in the posterior wall of the frontal sinus by too vigorous curetting at operation.[17] Clean, skilful surgery resulting in thorough drainage is our chief reliance at the present time, both as a preventive and as, I believe, a therapeutic measure.

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ECTOPIC PREGNANCY WITH REPORT OF CASE.

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The record of ectopic gestations in one of the leading eastern hospitals over a period of ten years, gives the astonishing information that less than 60% of these cases were diagnosed as such previous to operation. The mortality in unoperated cases is 68.8%, while in cases recognized early and promptly operated it is only 5%.

Here indeed is an opportunity to wipe out an unnecessary waste of human life, and it is the duty of every general practitioner (for it is to him that these cases first come for aid) to speed up in the early diagnosis of this condition and by prompt surgical measures save these patients from an untimely end.

Given the history in a case similar to the one recited below and any medical student ought to make the diagnosis, and yet in the minds of the profession there is much doubt and fear regarding this situation. Even among the teachers in the medical colleges one hears the subject lectured upon in such a solemn and fearful manner that he is apt to believe that he is on holy ground when approaching such a case, and it is but right and proper that he advance with fear and trembling. The readiness and certainty in the diagnosis of my first cases of extra-uterine pregnancies disillusioned me regarding the difficulty and exploded the false belief that this is a condition to be recognized only by the chosen few within the doors of large hospitals. The condition is not so rare but that it may happen in the practice of every doctor. That it is not recognized or at least suspected is in a measure due to failure of physicians to attach the importance deserved by the slight and transitory symptoms of the incipiency. In this respect the patients themselves commonly ignore the warning of what to them seems relatively an unimportant

matter, and certainly the condition presents no very alarming symptoms previous to rupture. The text books give the frequency of ectopic gestation as 1 in 500 to 1000 cases of pregnancy, and most of them are given to emphasis regarding a previous extended period of sterility. This is by no means an essential point in the history, although it seems uppermost in the minds of most men when considering a case. It will be noted in the present case that there has been rapid childbearing instead.

By the history alone the diagnosis is evident, certainly it will stand apart from other numerous and perplexing pelvic troubles and, together with positive vaginal signs, there can be no room for further doubt. The rupture will generally occur between the third and fifth week, although it may not happen until the twelfth week and exceptionally goes to full term. An ectopic pregnancy and its rupture may happen between the period for two regular menstruations. But are they normal menstruations?

They are not, and herein lies the key to the whole subject. There will be irregular bleeding with pelvic discomfort and sharp cutting pains, and feeling of faintness. These symptoms at first may be fleeting, with intervals when the woman will feel well, but they are sure to be repeated with an increase in duration and intensity, until the terrific and lancinating pain that is unbearable and accompanied by collapse and symptoms of internal hemorrhage, announces the occurrence of rupture. Here you have to deal now with a most critical situation. The submarine has shown her periscope on one or more occasions previously, but now she has launched the torpedo and it has found the mark. If the ship doesn't go down at once there is likely another and fatal shot awaiting her later. Such is the case with ruptured extra-uterine pregnancy, and while the primary hemorrhage may not be fatal, still it may be, and subsequent hemorrhage means great peril to the life of the patient.

In addition to the facts brought out in the history of these cases there may be the early signs and symptoms of a normal pregnancy with tenderness of the breast and morning sickness along with softening of the cervix, and careful examination will discover a tender tumor in the vaginal fornix. A positive Abderhalden test will establish the fact that you are dealing with a case in which there is a pregnancy, while the normal or slightly increased leucocytic count will exclude conditions of an inflammatory type. Altogether the modern doctor has at his instant command valuable means to aid in diagnosis of ectopic gestation, and there is slight excuse for failure to do. The history alone will be the most important factor in solving the question.

The following case will serve as a pen picture to illustrate the subject:

Multipara, age 29; nursing ninth baby, age 10 months. No abortions nor miscarriages, no record of past inflammatory pelvic disorder.

Menstruation began at 14, regular, of thirty-day type, duration of four days, using three napkins a day, always begins menstruating six months after parturition.

On May 22d had regular period, normal in duration and amount and on June 12th, while at supper table, felt a sudden sharp pain in right side of pelvis, which lasted only a short while but patient felt faint and weak, also noted a small flow of blood that night and following day. Otherwise felt well.

June 15th. While doing some light house work had a similar attack but of greater severity, and patient was compelled to lie down for several hours. There was a return of bleeding which soiled one napkin. The patient soon recovered again and felt well. Her husband suggested that he call in a doctor to which the woman would not consent and insisted that she would be all right.

June 22d. Began what she thought was a normal period. Had no pain but the flow lasted only two days and stopped.

June 25th. Returning home from a moving picture show had an attack of pain which was sharper and lasted longer than any previous attack, with the patient feeling very faint and weak. Shortly afterwards I visited the patient, who had somewhat recovered from the attack. Examination showed voluntary abdominal rigidity and right sided tenderness, skin moist, pulse 90, temperature normal. Bimanual examination showed slight uterine enlargement, marked tenderness in right vaginal fornix, with tubular enlargement of the outer end of fallopian tube.

Diagnosis.

Ectopic pregnancy, threatened rupture. Advised immediate operation; refused. Hypodermic morphia 1/6 gr., ice bag. At 2 o'clock in the morning was called again to see patient because of excruciating pain and found her in hemorrhagic shock. Pulse 130, rapid breathing, clammy skin, etc. Ruptured ectopic pregnancy. Hemorrhage soon stopped and pain controlled by additional morphine.

The following morning the patient's temperature was 99, pulse 92. Abdomen very tender, white blood count 10,000, red blood count 3,900,000, Haemoglobin 75. Vaginal examination showed exquisite tenderness on the right side and marked increase in size of tumor.

As the patient had not yet consented to being operated she was kept very quiet under the influence of morphia and ice to abdomen. The following day the patient was taken to the hospital and I operated her, assisted by Dr. J. B. Hardy. On opening the peritoneum a large quantity of blood escaped Fundus of uterus was seized and brought forward and clamp applied to broad ligament which quickly controlled all bleeding The abdomen was cleansed of blood, the rupture tube removed. The appendix was next examined which disclosed a hardened tip and as the patient was in good condition, this too was removed. Recovery uneventful, patient left the hospital on the tenth day. The tubes showed no kinks or other malformation to act as a cause in the condition.

CONCLUSION.

The menstrual history, with the recurrence of the symptoms, regardless of positive vaginal findings, is the important feature in cases of ectopic pregnancy.

The tendency on the part of the patients to ignore the early symptoms and of the doctor to disregard their importance.

The classic history and symptoms, in conjunction with a tender tumor in vaginal fornix, makes an easy diagnosis and should never pass unrecognized. Early operation, previous to rupture with the consequent reduction in mortality.

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